

PLAYFUL DISCIPLINARY LEARNING

Rebecca Woodard

(rwoodard@uic.edu) is an associate professor of Literacy, Language, and Culture in the department of Curriculum and Instruction at the University of Illinois Chicago (UIC).

Rebecca Kotler

(rkotler2@uic.edu) is a postdoctoral research associate in the Department of Curriculum and Instruction at UIC.

Maria Varelas

(mvarelas@uic.edu) is a professor of Science Education and chair of UIC's Department of Curriculum and Instruction.

Rachelle Palnick Tsachor

(rtsachor@uic.edu) is an associate professor of Theatre Movement at UIC's School of Theatre and Music.

Nathan C. Phillips

(phillipn@uic.edu) is an assistant professor of Literacy, Language, and Culture in UIC's Department of Curriculum and Instruction and co-coordinator of the Language, Literacies, and Learning MEd program.

Marcie Gutierrez

(mgutierrez@cps.edu) is a National Board-certified elementary school teacher in the Chicago Public Schools district.

Using drama to move along with reading, writing, drawing, and talking

By **Rebecca Woodard, Rebecca Kotler, Maria Varelas, Rachelle Palnick Tsachor, Nathan C. Phillips, & Marcie Gutierrez**

While a class of second graders studied the form and function of ants' body parts, they looked at and made diagrams to represent where an ant's head, thorax, and abdomen are. They also read and discussed what these parts do (see Jamal's diagram in the photo on the next page). But the learning did not stop there.

Reading, writing, drawing, and talking are threaded across young children's learning in disciplines like science. Jamal and his classmates diagrammed the ants' body parts, as do many other elementary children in science classrooms. In addition, though, the students in his class engaged in acting out in small groups their ideas about ants' body parts and functions. His teacher's focus on incorporating movement into science learning was collaboratively developed among educators in the context of Project STAGE (Science Theatre for Advancing Generative Engagement), a partnership between University of Illinois Chicago and Chicago Public Schools focused on the integration of science, theater, and literacy practices. Adding acting out or dramatizing into the science class—alongside reading, writing, drawing, and talking—gives children additional opportunities to explore concepts by making them come to life via their bodies (individually and collectively), and thus, to deepen and widen their knowledge; it is also fun and engaging.

Jamal's group, like most of the other groups in his class, focused on representing all three major parts of an ant. Harmony, wearing a headband that reminded her group that ants have antennae, was chosen to stand at the front, where she opened and closed her hands near her face to represent the mandibles. In the middle, Jamal and Bailey held hands and moved together, representing the thorax. And Demarion bent over at the back to represent the abdomen and thumped his right hand on his chest to represent the ant's heart pumping blood. He also used his other hand on his back to represent the stinger. A fifth student served as a narrator, asking them to walk around in a circle. As they did so, Jamal's group moved together as a unit, never straying from each other.

Dramatizing as a space and place of play, joy, choice, and freedom

When asked to reflect on his group's movement work, Jamal wrote, "I love how we work." This love for their work together was visible: As the students planned and shared, giggling permeated the air and there was a profound sense of playfulness. After the groups had some time to plan, they shared how

they felt about it. Sierra, who was in a different group, mentioned that “it feels like your body is vibrating and it’s putting more energy inside you,” and Tiffany said, “When I dance, it makes me feel like I’m an insect, like I’m moving a lot.” Often, teaching spaces are characterized by restricting bodies, but these children had just experienced learning through movement and the joy that comes with that freedom to move their bodies in the classroom.

After the lesson, when the whole class assembled on the rug to talk about what they learned, Kylie—whose group had laid on the ground and used their legs, rather than their hands, to represent mandibles opening and closing—said her favorite thing about the day was “how everybody worked together.” Andre liked the ways that “they used their feet to munch the food up,” noting that “those are called mandibles! They put the food in!” So often, children are chastised, not praised, for laying on the ground in the classroom, and this comment shows how such a way of moving the body is so meaningfully linked with science learning.

Dante’s comment about the stinger’s different representations (“We did it with a ruler, they did it with their fingers”) also draws attention to how the groups did not have to dramatize concepts in the same ways. In fact, the different ways the groups creatively drew from their available resources and made different choices to represent the stingers (and other concepts) were helpful for their meaning making, as Dante also shared that before he “didn’t know that ants had stingers.”

Dramatizing as a way to deepen and demonstrate learning

As educators, we are excited by how much more we can see about Jamal’s science knowledge from watching his group plan and do an enactment than we can by looking only at his written words and diagram. In the dramatization, we see his group’s attention to the importance of the interconnectedness of various ant parts, and we gain ideas about ways in which some parts move and work,



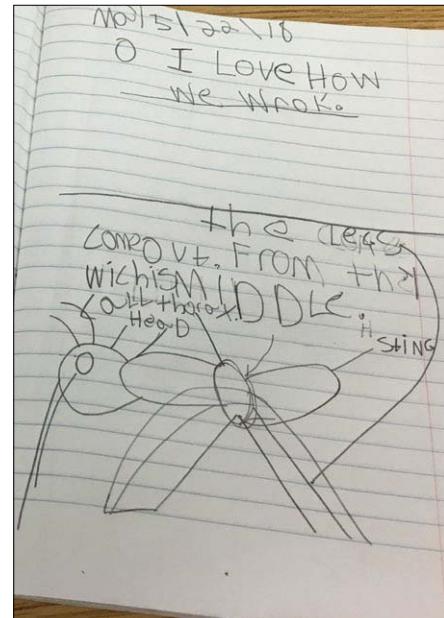
The children acting out the anatomy of an ant

like the thumping of the heart and the opening and closing of the mandibles. In their planning, enacting, and discussing, we hear the children’s surprise that ants have stingers and see their joy at trying to stay interconnected as they move together.

Dramatizing invites children to explore ideas more deeply by thinking, sensing, feeling, and communicating ideas with their whole bodies—whether it is a science concept, a moment in history, or a piece of literature. It allows for dynamic engagement with phenomena, particularly around movement, connections, and actions. When teachers support the dramatic play that children design and do, their learning is revealed in ways that remain shrouded on more formalized assessments.

Supporting playful disciplinary learning through dramatization

Drawing from our research on the intersection of literacy, movement/



Jamal’s journal entry depicting and naming parts of an ant

theater, and science in public school elementary classrooms in Chicago, we suggest three ways literacy leaders and educators can support playful disciplinary learning through dramatization:

Dramatizing invites children to explore ideas more deeply by thinking, sensing, feeling, and communicating ideas with their whole bodies.

1. Offer children opportunities to explore and represent ideas in multiple modes, including movement. Often, educators privilege staying still while reading and writing as primary modes of exploration and communication. However, we know that different modes (e.g., audio, visual, diagrammatic, and movement) not only offer different affordances and constraints but also work together to strengthen insight and memory. By offering children opportunities to explore and represent ideas in multiple modes, including movement, we give more opportunities to share (and honor) diverse ways of thinking, knowing, and communicating. Unsettling traditional parameters of representation also allows children to explore concepts differently and to deepen and widen their knowledge by experiencing ideas with their bodies and by building necessary connections among ideas. Encouraging movement, in particular, attends to

FURTHER READING

■ Varelas, M., Kotler, R.T., Natividad, H.D., Phillips, N.C., Tsachor, R.P., Woodard, R., Gutierrez, M., Melchor, M.A., & Rosario, M. (2022). "Science theatre makes you good at science": Affordances of embodied performances in urban elementary science classrooms. *Journal of Research in Science Teaching*, 59(4), 493–528. doi.org/10.1002/tea.21735

inequities in schools, where some students' movements are often more monitored, restricted, and controlled.

2. Support choice-making and encourage play. Whether through dramatization or other forms,

offering choices about how to investigate and represent a concept can support varying perspectives, creativity, and play. Another teacher in Project STAGE regularly prompted his fourth graders to "be creative and have fun" as they shared their science dramatizations and multimodal compositions—an invitation we consider essential in supporting playful learning.

3. Include opportunities to share and reflect.

As with writing, dramatization in the classroom has the greatest potential when it is shared, discussed, and reflected upon. As children share their dramatizations with their teachers and classmates, and hear the questions that arise, they can reflect on their ideas and representations, and engage in meaningful revision. As children share, this is an excellent opportunity for teachers to assess their learning and plan for further instruction. ■

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